

Serial No.: 10/786,575
Examiner: H. Choi
Title: OPTICAL PRINthead AND IMAGE FORMING APPARATUS
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Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (currently amended) An optical printhead comprising:
 - a light source[[],];
 - a light guide including a light incident surface facing the light source and a flat light emitting surface extending in a primary scanning direction; and
 - a light collecting layer facing the light emitting surface and transmitting light emitted from the light emitting surface;wherein the light collecting layer causes diffused light from the light emitting surface to be collected in a normal direction of the light emitting surface; and
wherein the light guide includes a counter surface extending in the primary scanning direction and arranged opposite to the light emitting surface, the counter surface being provided with a plurality of grooves spaced from each other in the primary scanning direction, each of the grooves including inclined surfaces for reflecting light traveling in the light guide so that the light is directed toward the light emitting surface, the grooves becoming progressively shallower toward the light source.
2. (canceled)
3. (currently amended) The optical printhead according to claim 21, further comprising a mirror reflector covering the counter surface.
4. (original) The optical printhead according to claim 1, wherein the light collecting layer comprises a first prism layer provided with a plurality of ridges extending parallel to each other.

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5. (original) The optical printhead according to claim 4, wherein each of the ridges includes a triangular section.
6. (original) The optical printhead according to claim 4, wherein each of the ridges extends parallel to the primary scanning direction.
7. (original) The optical printhead according to claim 4, further comprising a second prism layer cooperating with the first prism layer for collecting light, wherein the second prism layer is provided with a plurality of ridges extending parallel to each other, each of the ridges of the second prism layer extending across the ridges of the first prism layer.
8. (original) The optical printhead according to claim 7, wherein each of the ridges of the second prism layer includes a triangular section.
9. (original) The optical printhead according to claim 1, further comprising a liquid crystal shutter facing the light emitting surface of the light guide via the light collecting layer, wherein the liquid crystal shutter comprises a plurality of shutter portions arranged in a row extending in the primary scanning direction.
10. (original) An image forming apparatus comprising:
an optical printhead according to claim 1; and
a photosensitive recording medium irradiated by the optical printhead.
11. (new) An optical printhead comprising:
a light source;
a light guide including a light incident surface facing the light source and a flat light emitting surface extending in a primary scanning direction;
a light collecting layer facing the light emitting surface and transmitting light emitted from the light emitting surface;
a lens array for transmitting light from the light collecting layer; and

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a prism for directing light from the lens array toward a photosensitive recording medium, the prism including a light emitting surface;

wherein the light collecting layer causes diffused light from the light emitting surface of the light guide to be collected in a normal direction of the light emitting surface of the light guide; and

wherein the light emitting surface of the prism includes a recess and protrusions, the light emitting surface of the prism contacting the photosensitive recording medium only at the protrusions.

12. (new) An optical printhead comprising:

a light source;

a light guide including a light incident surface facing the light source and a flat light emitting surface extending in a primary scanning direction;

a light collecting layer facing the light emitting surface and transmitting light emitted from the light emitting surface;

a lens array for transmitting light from the light collecting layer, the lens array including a plurality of lenses retained by a lens holder; and

a prism for directing light from the lens array toward a photosensitive recording medium, the prism including a light incident surface held in contact with the lens holder of the lens array;

wherein the light collecting layer causes diffused light from the light emitting surface of the light guide to be collected in a normal direction of the light emitting surface of the light guide; and

wherein the light incident surface of the prism includes a recess facing and spaced from the lenses of the lens array.